

UB

## SEQUENCE LISTING

<110> Hall, Roderick L
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 Taylor, William J.A.

<120> A Method for Accelerating the Rate of Mucociliary Clearance

<130> 98,736

<140> 09/218,913

<141> 1998-12-22

<160> 71

<170> Microsoft Word 97

<210> 1

<211> 179

<212> PRT

<213> Homo sapien

<400> 1

Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val

1 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
50 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp 65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser 85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr
100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg
115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr dly Gly Cys Arg Gly Asn Lys Asn 130 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln 145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Set Lys Val Val Val Leu Ala Gly
165 175

Ala Val Ser

<210> 2 <211> 197 <212> PRT <213> Homo sapien <220> <221> sig\_peptide <222> 1..18 <400> 2 Ala Gly Ser Phe Leu Ala Trp Leu Gly Ser Leu Leu Leu Ser Gly Val Leu Ala Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser 25 Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly 55 Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala 120 Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val 135 Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Leu 185 Ala Gly Ala Val Ser 195 <210> 3 <211> 153 <212> PRT <213> Homo sapien <400> 3 Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala

Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu

Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys

Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr Gly 50 60

Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser Ala 65 70 75 80

Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr 85 90 95

Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser 100 105 110

Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe 115 120 125

Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu
130 135 140

Ala Cys Met Leu Arg Cys Phe Arg Gln 145 150

<210> 4

<211> 58

<212> PRT

<213> Homo sapien

<400> 4

Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala 1 5 10 15

Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu 20 25 30

Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys 35 40 45

Glu Glu Cys Leu Lys Lys Cys Ala Thr Val

<210> 5

<211> 51

<212> PRT

<213> Homo sapien

<400> 5

Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg 1 5 10 15

Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly 20 25 30

Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu
35 40

Lys Lys Cys 50

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<210> 6
<211> 58
<212> PRT
<213> Homo sapien
<400> 6
Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala
Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn
                                25
Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu
Glu Ala Cys Met Leu Arg Cys Phe Arg Gln
<210> 7
<211> 51
<212> PRT
<213> Homo sapien
Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg
Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly
Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met
                            40
Leu Arg Cys
    50
<210> 8
<211> 92
<212> PRT
<213> Homo sapien
<400> 8
Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val
Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr
Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser
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Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser 85 90

70

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp

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<210> 9
<211> 708
<212> DNA
<213> Homo sapien
<220>
<221> misc feature
<222> 679..708
<223> /note= "n at positions 622, 679, 707 is any nucleic acid"
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ggccgggtcg tttctcgcct ggctgggatc gctgctcctc tctggggtcc tggcggccga
                                                                       60
ccgagaacgc agcatccacg acttctgcct ggtgtcgaag gtggtgggca gatgccgggc
                                                                      120
ctccatgcct aggtggtggt acaatgtcac tgacggatcc tgccagctgt ttgtgtatgg
                                                                      180
gggctgtgac ggaaacagca ataattacct gaccaaggag gagtgcctca agaaatgtgc
                                                                      240
cactgtcaca gagaatgcca cgggtgacct ggccaccagc aggaatgcag cggattcctc
                                                                      300
                                                                      360
tgtcccaagt gctcccagaa ggcaggattc tgaagaccac tccagcgata tgttcaacta
tgaagaatac tgcaccgcca acgcagtcac tgggccttgc cgtgcatcct tcccacgctg
                                                                      420
gtactttgac gtggagagga actcctgcaa taacttcatc tatggaggct gccggggcaa
                                                                      480
taagaacagc taccgctctg aggaggcctg catgctccgc tgcttccgcc agcaggagaa
                                                                      540
tectecetg eccettgget caaaggtggt ggttetggee ggggetgttt egtgatggtg
                                                                      600
ttgatccttt tcctggggag cntccatggt cttactgatt ccgggtggca aggaggaacc
                                                                      660
                                                                      708
aggagcgtgc cctgcgganc gtctggagct tcggagatga caagggnt
<210> 10
<211> 235
<212> PRT
<213> Homo sapien
<220>
<221> peptide
<222> 1..235
<223> /note= "Xaa at positions 201, 226, and 233 are nonsence or stop codons"
<400> 10
Ala Gly Ser Phe Leu Ala Trp Leu Gly Ser Leu Leu Ser Gly Val
Leu Ala Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser
Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn
                            40
Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly
Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala
```

Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala 85 90 95

Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp
100 105 110

His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala 115 120 125

Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val 130 135 140

Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn 145 150 155 160

Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg 165 170 175

Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Leu 180 185 190

Ala Gly Ala Val Ser Xaa Trp Cys Xaa Ser Phe Ser Trp Gly Ala Ser 195 200 205

Met Val Leu Leu Ile Pro Gly Gly Lys Glu Glu Pro Gly Ala Cys Pro 210 215 220

Ala Xaa Arg Leu Glu Leu Arg Arg Xaa Gln Gly 225 230 235

<210> 11

<211> 170

<212> PRT

<213> Homo sapien

<220>

<221> peptide

<222> 1..170

<223> /note= "Xaa at positions 8, 17, 21-26, 40, 42, 45-47, 52, 64, 103, 112, 114, 116-121, 135, 137, 140-142, 147, and 159 is any amino acid residue"

<400> 11

Ala Asp Arg Glu Arg Ser Ile Xaa Asp Phe Cys Leu Val Ser Lys Val 1 5 10 15

Xaa Gly Xaa Cys Xaa Xaa Xaa Xaa Xaa Trp Trp Tyr Asn Val Thr
20 25 30

Asp Gly Ser Cys Gln Leu Phe Xaa Tyr Xaa Gly Cys Xaa Xaa Xaa Ser 35 40 45

Asn Asn Tyr Xaa Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Xaa 50 55 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp 65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr Xaa Glu Tyr Cys Thr Ala Asn Ala Val Xaa 100 105 Gly Xaa Cys Xaa Xaa Xaa Xaa Xaa Trp Tyr Phe Asp Val Glu Arg 120 Asn Ser Cys Asn Asn Phe Xaa Tyr Xaa Gly Cys Xaa Xaa Xaa Lys Asn 135 Ser Tyr Xaa Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Xaa Gln 155 Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Leu Ala Gly 170 Ala Val Ser <210> 12 <211> 393 <212> DNA <213> Homo sapien <220> <221> misc feature <222> 390..391 <223> /note= "residue 361 is any nucleic acid" <220> <221> misc\_feature <222> 390..391 <223> /note= "residue 367 is any nucleic acid" <220> <221> misc\_feature <222> 384..385 <223> /note= "residue 384 is any nucleic acid" <220> <221> misc\_feature <222> 367..368 <223> /note= "residue 390 is any nucleic acid" <400> 12 ggccgggtcg tttctcgcct ggctgggatc gctgctcctc tctggggtcc tggccggccg 60 accgagaacg cagcatccac gacttctgcc tggtgtcgaa ggtggtgggc agattccggg 120 180 cctccatgcc taggtggtgg tacaatgtca ctgacggatc ctgccagctg tttgtgtatg ggggctgtga cggaaacagc aataattacc tgaccaagga ggagtgcctc aagaaatgtg 240 300 ccactgtcac agagaatgcc acgggtgacc tggccaccag caggaatgca gcggattcct ctgtcccaag tgctcccaga aggcaggatt cttgaagacc acttcagcga tatgtttcaa 360

393

ntattgnaag aataattgca ccgncaacgn att

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<210> 13
<211> 130
<212> PRT
<213> Homo sapien
<220>
<221> Region
<222> 1..18
<223> /label= signal peptide
<220>
<221> Peptide
<222> 111..130
<223> /note= "Xaa at positions 111, 120, 122, 128, and 130 represents a
nonsense or stop codon"
<400> 13
Pro Gly Arg Phe Ser Pro Gly Trp Asp Arg Cys Ser Ser Leu Gly Ser
Trp Pro Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser
                                25
Lys Val Val Gly Arg Glu Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn
Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly
Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala
Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala
                                     90
Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Xaa Arg
                                105
Pro Leu Gln Arg Tyr Val Ser Xaa Ile Xaa Arg Ile Ile Ala Pro Xaa
                                                 125
Thr Xaa
    130
<210> 14
<211> 511
<212> DNA
<213> Homo sapien
<220>
<221> misc feature
<222> 425..510
<223> /note= "n at positions 425, 482, and 510 is any nucleic acid"
<400> 14
gcaataatta cctgaccaag gaggagtgcc tcaagaaatg tgccactgtc acagagaatg
                                                                       60
ccacgggtga cctggccacc agcaggaatg cagcggattc ctctgtccca agtgctccca
gaaggcagga ttctgaagac cactccagcg atatgttcaa ctatgaagaa tactgcaccg
                                                                      180
```

ccaacgcagt cactgggcct tgccgtgcat ccttcccacg ctggtacttt gacgtggaga 240 ggaactcctg caataacttc atctatggag gctgccgggg caataagaac agctaccgct 300 ctgaggagge etgeatgete egetgettee geeageagga gaateeteee etgeeeettg 360 gctcaaaggt ggtggttctg gccggggctg tttcgtgatg gtgttgatcc ttttcctggg 420 gagentecat ggtettactg atteegggtg geaaggagga accaggageg tgeeetgegg 480 ancgtctgga gcttcggaga tgacaagggn t 511 <210> 15 <211> 169 <212> PRT <213> Homo sapien <220> <221> peptide <222> 1..169 <223> /note= "Xaa at positions 2, 23, 132, 160, and 167 represent a nonsense or stop codon" <400> 15 Gln Xaa Leu Pro Asp Gln Gly Gly Val Pro Gln Glu Met Cys His Cys His Arg Glu Cys His Gly Xaa Pro Gly His Gln Glu Cys Ser Gly Phe Leu Cys Pro Lys Ser Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr 50 55 Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn 90 Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln 105 Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Leu Ala Gly 115 120 Ala Val Ser Xaa Trp Cys Xaa Ser Phe Ser Trp Gly Ala Ser Met Val 135 Leu Leu Ile Pro Gly Gly Lys Glu Glu Pro Gly Ala Cys Pro Ala Xaa Arg Leu Glu Leu Arg Arg Xaa Gln Gly 165

<210> 16 <211> 428

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<212> DNA
<213> Homo sapien
<220>
<221> misc feature
<222> 1..430
<223> /note= "n at positions 3, 11, 12, 17, 51 and 429 represent any nucleic
acid"
<400> 16
gengegegtt nntegentge tgggateget getgeacete tetggggteg nggeggeega
                                                                     60
ccgagaacgc agcatccacg acttctgcct ggtgtcgaag gtggtgggca gatgccgggc
                                                                     120
                                                                     180
ctccatgcct aggtggtggt acaatgtcac tgacggatcc tgccagctgt ttgtgtatgg
gggctgtgac ggaaacagca ataattacct gaccaaggag gagtgcctca agaaatgtgc
                                                                     240
cactgtcaca gagaatgcca cgggtgacct ggccaccagc aggaatgcag cggattcctc
                                                                     300
                                                                     360
tgtcccaagt gctcccagaa ggcaggattc ttgaagacca cttcagcgat atgttcaact
                                                                     420
atgaagaata ctggcaccgc caacgcattc actgggcctg cgtgcatcct tcccacgctg
                                                                      431
gtactttgnc g
<210> 17
<211> 424
<212> DNA
<213> Homo sapien
<220>
<221> misc feature
<222> 1..424
<223> /note= "n at positions 6, 310 and 408 represent any nucleic acid"
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tgggantcgc tgctcctctc tggggtcctg gcggccgacc gagaacgcag catccacgac
ttctgcctgg tgtcgaaggt ggtgggcaga tgccgggcct ccatgcctag gtggtggtac
                                                                     120
aatgtcactg acggatcctg ccagctgttt gtgtatgggg gctgtgacgg aaacagcaat
                                                                     180
                                                                     240
aattacctga ccaaggagga gtgcctcaag aaatgtgcca ctgtcacaga gaatgccacg
ggtgacctgg ccaccagcag gaatgcagcg gattcctctg tcccaagtgc tcccagaagg
                                                                     300
caggattctn gaagaccact ccagcgatat gttcaactat gaagaatact gcaccgccaa
                                                                     360
cgcagtcact gggccttgcg tggaatcctt tcccacgctg gnaatttnga cgttgagaag
                                                                     420
gaac
                                                                      424
<210> 18
<211> 57
<212> PRT
<213> Unknown
<220>
<221>
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<222>
<223> /note= "Tissue factor pathway inhibitor precursor 1"
His Ser Phe Cys Ala Phe Lys Ala Asp Asp Gly Pro Cys Lys Ala Ile
Met Lys Arg Phe Phe Phe Asn Ile Phe Thr Arg Gln Cys Glu Glu Phe
Ile Tyr Gly Gly Cys Glu Gly Asn Gln Asn Arg Phe Glu Ser Leu Glu
Glu Cys Lys Lys Met Cys Thr Arg Asp
<210> 19
<211> 57
<212> PRT
<213> Unknown
<220>
<223> /note= "Tissue factor pathway inhibitor precursor 1"
Pro Asp Phe Cys Phe Leu Glu Glu Asp Pro Gly Ile Cys Arg Gly Tyr
Ile Thr Arg Tyr Phe Tyr Asn Asn Gln Thr Lys Gln Cys Glu Arg Phe
Lys Tyr Gly Gly Cys Leu Gly Asn Met Asn Asn Phe Glu Thr Leu Glu
Glu Cys Lys Asn Ile Cys Glu Asp Gly
    50
<210> 20
<211> 57
<212> PRT
<213> Unknown
<220>
<223> /note= "Tissue factor pathway inhibitor precursor"
<400> 20
Pro Ser Trp Cys Leu Thr Pro Ala Asp Arg Gly Leu Cys Arg Ala Asn
Glu Asn Arg Phe Tyr Tyr Asn Ser Val Ile Gly Lys Cys Arg Pro Phe
Lys Tyr Ser Gly Cys Gly Gly Asn Glu Asn Asn Phe Thr Ser Lys Gln
Glu Cys Leu Arg Ala Cys Lys Lys Gly
<210> 21
<211> 57
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<212> PRT
<213> Unknown
<220>
<223> /note= "Tissue factor pathway inhibitor precursor 2"
Ala Glu Ile Cys Leu Leu Pro Leu Asp Tyr Gly Pro Cys Arg Ala Leu
Leu Leu Arg Tyr Tyr Tyr Arg Tyr Arg Thr Gln Ser Cys Arg Gln Phe
                                25
Leu Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asn Phe Tyr Thr Trp Glu
Ala Cys Asp Asp Ala Cys Trp Arg Ile
<210> 22
<211> 57
<212> PRT
<213> Unknown
<223> /note= "Tissue factor pathway inhibitor precursor 2"
<400> 22
Pro Ser Phe Cys Tyr Ser Pro Lys Asp Glu Gly Leu Cys Ser Ala Asn
Val Thr Arg Tyr Tyr Phe Asn Pro Arg Tyr Arg Thr Cys Asp Ala Phe
                                25
Thr Tyr Thr Gly Cys Gly Asn Asn Asn Asn Phe Val Ser Arg Glu
Asp Ser Lys Arg Ala Cys Ala Lys Ala
<210> 23
<211> 57
<212> PRT
<213> Unknown
<223> /note= "Amyloid Precursor Protein homologue"
<400> 23
Lys Ala Val Cys Ser Gln Glu Ala Met Thr Gly Pro Cys Arg Ala Val
Met Pro Arg Thr Thr Phe Asp Leu Ser Lys Gly Lys Cys Val Arg Phe
Ile Thr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Glu Ser Glu Asp
Tyr Cys Met Ala Val Cys Lys Ala Met
                        55
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<210> 24
<211> 58
<212> PRT
<213> Unknown
<220>
<223> /note= "Aprotinin"
<400> 24
Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Lys Ala
Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
<210> 25
<211> 51
<212> PRT
<213> Unknown
<220>
<223> /note= "Inter alpha-trypsin inhibitior precursor"
Cys Gln Leu Gly Tyr Ser Ala Gly Pro Cys Met Gly Met Thr Ser Arg
Tyr Phe Tyr Asn Gly Thr Ser Met Ala Cys Glu Thr Phe Gln Tyr Gly
Gly Cys Met Gly Asn Gly Asn Asn Phe Val Thr Glu Lys Glu Cys Leu
                            40
Gln Thr Cys
   50
<210> 26
<211> 57
<212> PRT
<213> Unknown
<220>
<223> /note= "Inter alpha-trypsin inhibitor precursor"
<400> 26
Val Ala Ala Cys Asn Leu Pro Ile Val Arg Gly Pro Cys Arg Ala Phe
Ile Gln Leu Trp Ala Phe Asp Ala Val Lys Gly Lys Cys Val Leu Phe
Pro Tyr Gly Gly Cys Gln Gly Asn Gly Asn Lys Phe Tyr Ser Glu Lys
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40

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Glu Cys Arg Glu Tyr Cys Gly Val Pro
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                        55
<210> 27
<211> 57
<212> PRT
<213> Unknown
<223> /note= "Amyloid precursor protein"
<400> 27
Glu Val Cys Cys Ser Glu Gln Ala Glu Thr Gly Pro Cys Arg Ala Met
Ile Ser Arg Trp Tyr Phe Asp Val Thr Glu Gly Lys Cys Ala Pro Phe
Phe Tyr Gly Gly Cys Gly Gly Asn Arg Asn Asn Phe Asp Thr Glu Glu
Tyr Cys Met Ala Val Cys Gly Ser Ala
<210> 28
<211> 51
<212> PRT
<213> Unknown
<223> /note= "Collagen alpha-3 (VI) precursor"
<400> 28
Cys Lys Leu Pro Lys Asp Glu Gly Thr Cys Arg Asp Phe Ile Leu Lys
                                    10
Trp Tyr Tyr Asp Pro Asn Thr Lys Ser Cys Ala Arg Phe Trp Tyr Gly
Gly Cys Gly Gly Asn Glu Asn Lys Phe Gly Ser Gln Lys Glu Cys Glu
Lys Val Cys
   50
<210> 29
<211> 57
<212> PRT
<213> Unknown
<220>
<223> /note= "HKI-B9"
<400> 29
Pro Asn Val Cys Ala Phe Pro Met Glu Lys Gly Pro Cys Gln Thr Tyr
Met Thr Arg Trp Phe Phe Asn Phe Glu Thr Gly Glu Cys Glu Leu Phe
            20
                                25
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Ala Tyr Gly Gly Cys Gly Gly Asn Ser Asn Asn Phe Leu Arg Lys Glu
Lys Cys Glu Lys Phe Cys Lys Phe Thr
<210> 30
<211> 46
<212> DNA
<213> S. cerevisiae
<400> 30
                                                                       46
gccaagcttg gataaaagat atgaagaata ctgcaccgcc aacgca
<210> 31
<211> 35
<212> DNA
<213> S. cerevisiae
<400> 31
                                                                       35
ggggatcctc actgctggcg gaagcagcgg agcat
<210> 32
<211> 206
<212> DNA
<213> Homo sapien
<223> /note= "cDNA of human Bikunin protein fragment"
<400> 32
ccaagettgg ataaaagata tgaagaatac tgcaccgcca acgcagtcac tgggccttgc
                                                                       60
cgtgcatcct tcccacgctg gtactttgac gtggagagga actcctgcaa taacttcatc
                                                                      120
                                                                      180
tatggaggct gccggggcaa taagaacagc taccgctctg aggaggcctg catgctccgc
                                                                      206
tgcttccgcc agcagtgagg atcccc
<210> 33
<211> 28
<212> DNA
<213> Homo sapien
                                                                       28
cgaagettea teteegaage teeagaeg
<210> 34
<211> 31
<212> DNA
<213> Homo sapien
<400> 34
                                                                       31
aggatctaga caataattac ctgaccaagg a
<210> 35
<211> 36
<212> DNA
<213> Homo sapien
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ggtctagagg	ccgggtcgtt	tctcgcctgg	ctggga			37
<210> 36 <211> 19 <212> DNA <213> Homo	sapien					
<400> 36 cacctgatcg	cgagacccc					19
<210> 37 <211> 19 <212> DNA <213> Homo	sapien					
<400> 37 gatttaggtg	acactatag					19
<210> 38 <211> 20 <212> DNA <213> Homo	sapien					
<400> 38 taatacgact	cactataggg					20
<210> 39 <211> 22 <212> DNA <213> Homo	sapien					
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<210> 40 <211> 23 <212> DNA <213> Homo	sapien					
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<400> 41 cagtcactgg	gccttgccgt		•			20
<210> 42 <211> 105 <212> DNA <213> Homo	sapien					
<400> 42 gaaggggtaa	gcttggataa	aagatatgaa	gaatactgca	ccgccaacgc	agtcactggg	60

ccttgcc	gtg	catco	cttc	cc a	egete	ggtad	: tti	gac	gtgg	agag	39					105
<210> 4 <211> 1 <212> D <213> H	29 NA	sapie	en													
<400> 4 cgcggat		tacto	ggcgg	ga ag	gcago	eggag	g cai	gcag	ggcc	tcct	caga	agc (	ggtag	gctgt	:t	60
cttattg	ccc (	cggca	agcct	cc ca	ataga	atgaa	gti	att	gcag	gagt	tcc	tct (	ccac	gtcaa	ıa	120
gtaccag	cg															129
<210> 4 <211> 2 <212> D <213> H	07 NA	sapie	en						·							
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						_	_		_						_	
ccttgcc																120
ttcatct	atg 9	gaggo	ctgc	g gg	ggcaa	ataag	g aad	cagct	acc	gcto	ctgag	gga g	ggcct	gcat	:g	180
ctccgct	gct 1	tccg	ccagt	a gg	gato	cc										207
<210> 4 <211> 2 <212> P <213> H <220> <221> R	48 RT omo s	_	en													
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Leu Leu	Ser	Gly 20	Val	Leu	Ala	Ala	Asp 25	Arg	Glu	Arg	Ser	Ile 30	His	Asp		
Phe Cys	Leu 35	Val	Ser	Lys	Val	Val 40	Gly	Arg	Cys	Arg	Ala 45	Ser	Met	Pro		
Arg Trp 50	Trp	Tyr	Asn	Val	Thr 55	Asp	Gly	Ser	Cys	Gln 60	Leu	Phe	Val	Tyr		
Gly Gly 65	Cys	Asp	Gly	Asn 70	Ser	Asn	Asn	Tyr	Leu 75	Thr	Lys	Glu	Glu	Cys 80		
Leu Lys	Lys	Cys	Ala 85	Thr	Val	Thr	Glu	Asn 90	Ala	Thr	Gly	Asp	Leu 95	Ala		
Thr Ser	Arg	Asn	Ala	Ala	Asp	Ser	Ser	Val	Pro	Ser	Ala	Pro	Arg	Arg		

Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr 115 120 125

Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg 130 135 140

Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly 145 150 155 160

Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met 165 \$170\$

Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser 180 185 190

Lys Val Val Val Leu Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe
195 200 205

Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln 210 215 220

Glu Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp Asp Lys Glu Gln 225 230 235 240

Leu Val Lys Asn Thr Tyr Val Leu 245

<210> 46

<211> 213

<212> PRT

<213> Homo sapien

<400> 46

Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val 1 5 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr 20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser 35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val $50 \\ \hspace{1.5cm} 55 \\ \hspace{1.5cm} 60$ 

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp 65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser 85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr 100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg 115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn 130 135 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln 145 150 155 160

يشتن المناهب المقطاب

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly 165 170 175

Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr 180 185 190

Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val 195 200 205

Trp Ser Phe Gly Asp 210

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<211> 240

<212> PRT

<213> Homo sapien

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<222> 1..18

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<400> 47

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Leu Gly Ser Leu Leu Leu Ser Gly Val Leu Ala Ala Asp Arg Glu Arg 20 25 30

Ser Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg 35 40 45

Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln 50 55 60

Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr 65 70 75 80

Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr 85 90 95

Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser 100 105 110

Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn 115 120 125

Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala 130 135 140

Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn 145 150 155 160

Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu 165 170 175

Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu

180 185 190

Pro Leu Gly Ser Lys Val Val Leu Ala Gly Leu Phe Val Met Val 195 200 205

Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala 210 215 220

Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val Trp Ser Phe Gly Asp 225 230 235 240

<210> 48

<211> 225

<212> PRT

<213> Homo sapiens

<400> 48

Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val 1 5 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr 20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser 35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val 50 55 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp 65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser 85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr 100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg 115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn 130 135 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln 145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly
165 170 175

Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr 180 185 190

Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val 195 200 205

Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu Val Lys Asn Thr Tyr Val 210 220

Leu

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Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala 210 215 220

Pro Leu Gly Ser Lys Val Val Leu Ala Gly Leu Phe Val Met Val

Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp 225 230 235 240

Asp Lys Glu Gln Leu Val Lys Asn Thr Tyr Val Leu 245 250

<210> 50 <211> 146 <212> PRT <213> Homo sapien <223> /note= "Human Bikunin protein fragment" Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly 120 Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys 145 <210> 51 <211> 170 <212> PRT <213> Homo sapien <223> /note= "Human Bikunin protein fragment" <400> 51 Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser 40 Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val

55

.60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp 65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser 85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr 100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg 115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn 130 135 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln 145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys 165 170

<210> 52

<211> 170

<212> PRT

<213> Homo sapien

<220>

<223> /note= "Human Bikunin protein fragment"

<400> 52

Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val 1 5 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr 20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser 35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val
50 60

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp 65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser 85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr 100 105 110

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg 115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn 130 135 140

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln 145 150 155 160

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Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys
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<210> 53
<211> 27
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<213> Homo sapien
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Leu Gly Ser Leu Leu Leu Ser Gly Val Leu Ala
<210> 54
<211> 23
<212> DNA
<213> Homo sapien
<223> Human Bikunin protein fragment
<400> 54
Met Leu Arg Ala Glu Ala Asp Gly Asn Ser Arg Leu Leu Gly Ser Leu
Leu Leu Ser Gly Val Leu Ala
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<210> 55
<211> 102
<212> DNA
<213> Artificial sequence
<220>
<223> /note= "Oligomer for preparing expression construct"
<400> 55
60
tgtagagctt cttttccaag atggtacttt gatgttgaaa ga
                                                                 102
<210> 56
<211> 129
<212> DNA
<213> Artificial sequence
<220>
<223> Oligomer for preparing expression construct
<400> 56
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                                                                  60
                                                                 120
tttattacct ctacaaccac cgtaaataaa attattacaa gaatttcttt caacatcaaa
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gtaccatct	129
<210> 57 <211> 108 <212> DNA <213> Artificial sequence	
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ggtccatgta gagcttcttt tccaagatgg tactttgatg ttgaaaga	108
<210> 58 <211> 117 <212> DNA <213> Artificial sequence	
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<400> 58 gaaggggtaa gcttggataa aagagatatg tttaattacg aagaatactg tactgctaat	60
gctgttactg gtccatgtag agcttctttt ccaagatggt actttgatgt tgaaaga	117
<210> 59 <211> 20 <212> DNA <213> Homo sapiens	
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<210> 60 <211> 23 <212> DNA <213> Homo sapiens	
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<210> 61 <211> 45 <212> DNA <213> Artificial sequence	
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<210> 62 <211> 60 <212> DNA <213> Artificial sequence	

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<220>
<223> /note= "Oligomer for preparing Bikunin construct"
ctgccccttg gctcaaagta ggaagatctt ccccccgggg gggtggttct ggcggggctg
                                                                        60
<210> 63
<211> 14
<212> PRT
<213> Homo sapien
<220>
<223> /note= "Human Bikunin protein fragment"
<400> 63
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<210> 64
<211> 20
<212> PRT
<213> Homo sapien
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                                     10
Val Gly Arg Cys
<210> 65
<211> 20
<212> PRT
<213> Homo sapien
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<400> 65
Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys
Arg Ala Ser Phe
            20
<210> 66
<211> 10
<212> PRT
<213> Homo sapien
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Pro Tyr Val Asp Gly Ser Gln Phe Tyr Gly
                5
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<211> 55
<212> PRT
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Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln Glu
Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu
Val Lys Asn Thr Tyr Val Leu
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<210> 68
<211> 43
<212> PRT
<213> Homo sapien
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Val Val Leu Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe Leu
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<210> 69
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Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln Glu
Arg Ala Leu Arg Thr Val Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu
Val Lys Asn Thr Tyr Val Leu
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<210> 70 <220>

<211> 213 <212> PRT <213> Homo sapien

<223> /note= "Human Bikunin protein fragment"

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Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn 135

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln 150 155

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Leu Ala Gly

Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr 185

Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val

Trp Ser Phe Gly Asp 210

<210> 71

<211> 225

<212> PRT

<213> Homo sapien

<220>

<223> /note= "Human Bikunin protein fragment"

<400> 71

Ala Asp Arg Glu Arg Ser Ile His Asp Phe Cys Leu Val Ser Lys Val 1 5 10 15

Val Gly Arg Cys Arg Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr 20 25 30

Asp Gly Ser Cys Gln Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser 35 40 45

Asn Asn Tyr Leu Thr Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val $50 \\ \hspace{1.5cm} 55 \\ \hspace{1.5cm} 60$ 

Thr Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp 65 70 75 80

Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser 85 90 95

Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr  $100 \hspace{1.5cm} 105 \hspace{1.5cm} 110 \hspace{1.5cm}$ 

Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg 115 120 125

Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn 130 \$135\$

Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln 145 150 155 160

Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Leu Ala Gly 165 170 175

Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr 180 185 190

Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg Thr Val

Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu Val Lys Asn Thr Tyr Val 210 215 220

Leu 225